

Listing and Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 1. (currently amended) A voltage level translator for operating an
2 operational amplifier integrated circuit designed for operation with a single
3 ended power supply, to operate with a split level power supply having a center
4 tapped ground, comprising:
5 first voltage level translating means for connecting a first polarity power
6 supply terminal of the operational amplifier integrated circuit and a first
7 capacitor coupled to ground to a first polarity of the power supply,
8 second voltage level translating means for connecting a second polarity
9 power supply terminal of the operational amplifier integrated circuit and a
10 second capacitor coupled to ground to a second polarity of the split level power
11 supply,
12 means for connecting a signal input terminal of the operational amplifier
13 to a center tapped ground of the split level power supply and:
14 wherein another signal input terminal of the operational amplifier is
15 coupled to a signal source referenced to ground without any DC isolation
16 capacitors connected in series with the amplifier and the output terminal of the
17 operational amplifier is coupled to a signal load referenced to ground without
18 any DC isolation capacitors connected in series with the amplifier.

1 2. (cancelled)

1 3. (previously presented) The voltage level translator of claim 1 wherein
2 the signal load is a loudspeaker having one terminal referenced to ground.

1 4. (original) The voltage level translator of claim 1 wherein the amplifier
2 includes a plurality of amplifiers on the same integrated circuit chip having a
3 common substrate, and all of the plurality of amplifiers are also voltage level
4 translated, the substrate being biased the same amount with respect to each of
5 the plurality of amplifiers.

1 5. (original) The voltage level translator of claim 1 wherein the split level
2 power supply having a center tapped ground also provides power to other
3 circuits performing other functions.

1 6. (currently amended) A The voltage level translator of claim 5 for
2 ~~operating an operational amplifier integrated circuit designed for operation with~~
3 ~~a single ended power supply, to operate with a split level power supply having~~
4 ~~a center tapped ground, comprising:~~
5 ~~—— first voltage level translating means for connecting a first polarity power~~
6 ~~supply terminal of the operational amplifier integrated circuit to a first polarity of~~
7 ~~the power supply and to a first capacitor (34) coupled to ground,~~
8 ~~—— second voltage level translating means for connecting a second polarity~~
9 ~~power supply terminal of the operational amplifier integrated circuit to a second~~
10 ~~polarity of the split level power supply, and~~
11 ~~—— means for connecting a signal input terminal of the operational amplifier~~
12 ~~to a center tapped ground of the split level power supply.~~
13 ~~—— wherein the split level power supply having a center tapped ground also~~
14 ~~provides power to other circuits performing other functions and:~~

15 wherein the amplifier includes an output load comprising an earphone and the
16 other circuits performing other functions is a DVD player. 4.

1 7. (original) The voltage level translator of claim 1 wherein the amplifier
2 has an AC reference which is connected to the DC voltage ground.

1 8. (previously presented) The voltage level translator of Claim 1,
2 wherein:

3 said operational amplifier has a predetermined maximum voltage rating
4 and said split level power supply having a voltage greater than said maximum
5 voltage rating; and

6 said first voltage level translating means and said second voltage level
7 translation means each comprise a respective Zener diode having respective
8 Zener voltages selected to enable said integrated circuit to operate within said
9 maximum voltage rating when powered by said split level power supply.

1 9. (previously presented) The voltage level translator of Claim 6,
2 wherein:

3 said operational amplifier has a predetermined maximum voltage rating
4 and said split level power supply having a voltage greater than said maximum
5 voltage rating; and

6 said first voltage level translating means and said second voltage level
7 translation means each comprise a respective Zener diode having respective
8 Zener voltages selected to enable said integrated circuit to operate within said
9 maximum voltage rating when powered by said split level power supply.

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1 10. (currently amended) A voltage level translator for operating an
2 operational integrated circuit designed for operation with a single ended power
3 supply, to operate with a split level power supply having a center tapped
4 ground, comprising:

5 a first voltage level translating means for connecting a first polarity
6 power supply terminal of the operational amplifier integrated circuit and a first
7 capacitor coupled to ground to a first polarity of the split level power supply;

8 a second voltage level translating means for connecting a second
9 polarity power supply terminal of the operational amplifier integrated circuit and
10 a second capacitor coupled to ground to a first second polarity of the split level
11 power supply;

12 said operational amplifier has a predetermined maximum voltage rating
13 and said split level power supply having a voltage greater than said maximum
14 voltage rating; and

15 said first voltage level translating means and said second voltage level
16 translation means each comprise a respective Zener diode having respective
17 Zener voltages selected to enable said integrated circuit to operate within said
18 maximum voltage rating when powered by said split level power supply.